

Inputs

N-fertilizer rates in crops	N-fertilizer for pasture No3 fertilizer for pasture, NH4 fertilizer for pasture, N manure application for pasture, N manure deposition for pasture	Land-use and land-cover map	Forest management map	Forest management map	Irrigation map	CROPGRIDS v1.08 crop dataset	FAO statistics (country wise)	Current PV locations
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Data Harmonisation

Land management intensity

Cropland management



N-fertiliser rates in crops

Very extensive: $< 50 \text{ kg N ha}^{-1} \text{ yr}^{-1}$, **Extensive with irrigation:** $50\text{-}100 \text{ kg N ha}^{-1} \text{ yr}^{-1}$ + irrigation and **Intensive with irrigation:** $\geq 100 \text{ kg N ha}^{-1} \text{ yr}^{-1}$ + irrigation
Extensive with rainfed: $50\text{-}100 \text{ kg N ha}^{-1} \text{ yr}^{-1}$ and **Intensive with rainfed:** $\geq 100 \text{ kg N ha}^{-1} \text{ yr}^{-1}$

Irrigation

Preparing a binary map with an information on irrigation.

Crop management intensity
Combining it with different crops datasets determining the management of different crop types.
Intensive-irrigated/rainfed crop: high application of fertiliser with/without irrigation
Extensive-irrigated/rainfed crop: high applications of fertiliser with/without irrigation
Very Extensive crop: very extensive fertiliser

Calculating the food, feed and bioenergy ratios for different crop uses by country

Various crop types



FAO statistics



Uses of different crop uses

Food (%)

Feed (%)

Bio-energy1G (%)

Forest management



- Extensive:** Naturally regenerating forests with signs of management, e.g., logging, clear cuts, etc.
- Intensive:** Planted forests (rotation > 15 years)
- Intensive:** Planted forests (rotation ≤ 15 years)
- Unmanaged forest**

Pasture management



N fertiliser rates

NH4
NO3
N manure application
N manure deposition

Very extensive: $< 50 \text{ kg N ha}^{-1} \text{ yr}^{-1}$
Extensive: $50\text{-}100 \text{ kg N ha}^{-1} \text{ yr}^{-1}$
Intensive: $\geq 100 \text{ kg N ha}^{-1} \text{ yr}^{-1}$

Pasture management intensity
Combining management intensity, it with HILDA+ pasture.
Intensive pasture: high fertiliser
Extensive pasture: high fertiliser
Very Extensive pasture: very extensive fertiliser
Unmanaged pasture: pasture with no management

Spatial distribution of land managers for different land uses

Spatial Distribution of Global Land Management

Photovoltaics, Urban, Agroforestry, Unmanaged, Water